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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,183	11/28/2001	Richard C. Abbott	50243/003002	2277

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EXAMINER

FASTOVSKY, LEONID M

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/996,183

Applicant(s)

ABBOTT ET AL.

Examiner

Leonid M Fastovsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 77-104 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 77-104 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 93-94, 96-100 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsukuda et al (4,808,490).

Tsukuda teaches a resistive heater 17 (Fig. 1-3) having a controlled resistivity, comprising a resistive layer 22, the resistive layer comprises a metallic component and a reaction product- NiCr (col. 3, lines 42-45), the resistivity being controlled by a reactant gas (argon and hydrogen, col. 4, line 43), and inherently having a power source because it is used for home appliances (Abstract, lines 7-10).

As for claims 96-100, Tsukuda teaches a substrate 16, an adhesion layer 18 between the insulating layer 20 and the substrate 16, the adhesion layer 18 comprises NI-Cr (col. 4, lines 31-36), the layer 20 being also a reflective layer and comprising zirconium oxide (col. 4, lines 38-42).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 95 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukuda in view of Ros (3,922,386).

Tsukuda teaches substantially the claimed invention, but does not teach that reactant gas comprises one or more of oxygen and nitrogen. Ros teaches a method of making a resistive heater (col. 3, lines 5-67, col. 4-6), the method comprising use of a reactant gas comprising oxygen (col. 3, lines 10-15). It would have been obvious to one having ordinary skill in the art to modify Tsukuda's invention to include oxygen as a reactant gas in order to the spheroids of metal produced become oxidized to form a corresponding metal oxide as taught by Ros (col. 3, lines 12-15).

5. Claims 101-102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukuda in view of Hyllberg (6,069,346).

Tsukuda teaches substantially the claimed invention including a layer 24 superficial to the resistive layer 22, but does not teach that the layer 24 is ceramic. Hyllberg teaches a ceramic layer 18 comprising alumina and is superficial to the resistive layer 17 (col. 4, lines 55-65). It would have been obvious to one having ordinary skill in the art to modify Tsukuda's invention to include a ceramic layer in order to transfer heat between the resistive layer and the work object as taught by Hyllberg (col. 4, lines 55-58).

6. Claims 77-92 and 103-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukuda in view of Ros and further in view of Sawamura et al (5,756,215).

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Tsukuda in view of Ros teaches substantially the claimed invention including the method of making a resistive heater (col. 3-6), but does not teach a controlled resistivity and that a resistive heater comprises a metallic layer comprising molybdenum or tungsten. Sawamura teaches a resistive heater having a controlled resistivity (col. 15, lines 1-58) and a conductive component in the form a metal silicide, typically MoSi<sub>2</sub> (Abstract, col. 15, lines 1-58). It would have been obvious to one having ordinary skill in the art to modify Tsukuda's invention to include a conductive component, typically MoSi<sub>2</sub> to the resistive layer and to modify Ros's invention in the invention of Tsukuda to include a controlled resistivity of the heater as taught by Sawamura (col. 15, lines 1-58).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. 6255608 (resistive heater), 6555257 (method of making a heater), 6133557 (resistive heater), 6127654 (method of making a heating element), 5039840 (method of making a heating element), 4296309 (controlled resistivity (col. 8)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid M Fastovsky whose telephone number is 703-306-5482. The examiner can normally be reached on M-Th. 8.00 am -6.00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 703-305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Leonid M Fastovsky  
Examiner  
Art Unit 3742

lmf